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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,105	11/19/2001	Kinya Kato	35.C15954	8078
5514	7590	01/21/2004	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			MAYEKAR, KISHOR	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/988,105

Applicant(s)

KATO ET AL.

Examiner

Kishor Mayekar

Art Unit

1753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 1-27, 30 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 28 and 29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-25, drawn to a process, classified in class 588, subclass 206.
 - II. Claims 26-31, drawn to an apparatus, classified in class 422, subclass 186.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used for reactions involving free radicals requiring light as a catalyst.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation between Attorney Elizabeth Holowacz and Examiner Anthony Kuhar on December 3, 2002 a provisional election was made with traverse to prosecute the invention of Group II, claims 26-31, affirmation of this election must be made by applicant in replying to this Office action. Claims 1-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. However, upon further examining the elected claims of Group II, further restriction to one of the following inventions is required under 35 U.S.C. 121:

IIA. Claims 26, 27, 30 and 31, drawn to an apparatus process, classified in class 422, subclass 186.

IIB. Claims 28 and 29, drawn to a process, classified in class 204, subclass 157.15.

The inventions are distinct, each from the other because of the following reasons:

6. Inventions of Groups IIA and IIB are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used for reactions involving free radicals requiring light as a catalyst.

7. Because these inventions are distinct for the reasons given above and the search required for Group IIA is not required for Group IIB, restriction for examination purposes as indicated is proper.

8. During a telephone conversation with Attorney Jason Okun on December 28, 2003 a provisional election was made with traverse to prosecute the invention of Group IIB, claims 28 and 29, affirmation of this election must be made by applicant in replying to this Office action. Claims 26, 27, 30 and 31 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

10. The abstract of the disclosure is objected to because it is not in the range of 50-150 words. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102 and § 103

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

Art Unit: 1753

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by WATANABE et al. (6,558,639). WATANABE's invention is directed to a purifier for purifying a fluid by eliminating contaminants from the fluid. WATANABE discloses in col. 3, lines 31-36 and in col. 4, line 42 through col. 5, line 3 a sequence of the operation of the air purifier which comprises the successive steps of introducing (or putting) a decomposing promoting substance **3**, having a function to decompose a decomposition target substance (air) under irradiation with light, into a decomposing area **1**; irradiating the decomposing area **1** with light; and putting

the decomposition target substance into the decomposing area 1. All the steps are started in the order as recited at the time of starting the operation of decomposing the decomposition target substance.

14. Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by SALAMA (6,180,014). SALAMA's invention is directed to a process for treating water with ozone generated by water electrolysis to destroy pollutants and microorganisms in the water. SALAMA discloses in col. 2, lines 38-42 that the process comprises the steps of producing oxygen by electrolysis at an anode, converting the oxygen in situ into ozone by the UV irradiation generated by a UV lamp; and reacting the generated ozone with the pollutants contained in the water to convert the pollutants into oxidation products. All the steps are started in the order as recited at the time of starting the operation of decomposing the decomposition target substance.

15. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over SALAMA '014. The difference between SALAMA as applied above and the above claim is that SALAMA is silent on the recited sequence of stopping steps.

Although SALAMA is virtually silent on the stopping steps, however, in SALAMA the pollutant-containing water being treated with the ozone generated in situ by irradiation of the oxygen produced in situ by electrolysis, it appears to one of ordinary skill in the art at the time the invention was made that SALAMA's process would encompass the sequence of stop supplying pollutant-containing water, stop irradiation with light and stop supplying of oxygen at the time of stopping the operation.

16. Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by BUTTERS et al. (6,136,203). BUTTERS's invention is directed to a method for photocatalytic treatment of contaminated media. BUTTERS discloses in Fig. 4 and in col. 9, lines 38-42 that the method comprises the combining of the process of transferring contaminants into an aqueous phase and the process of photocatalysis with a photocatalytic slurry within a reactor. Thus BUTTERS' method inherently possesses the recited sequence of starting steps at the time of starting the operation.

17. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over BUTTERS '203. The difference between BUTTERS as applied above and the above claim is that BUTTERS is silent on the recited sequence of stopping steps. Although BUTTERS is virtually silent on the stopping steps, however, in BUTTERS, the contaminants being decomposed by the combining of the process of transferring contaminants into an aqueous phase and the process of photocatalysis with a photocatalytic slurry within a reactor, it appears to one of ordinary skill in the art at the time the invention was made that BUTTERS's process would encompass the sequence of stop supplying pollutant-containing water, stop irradiation with light and stop supplying of oxygen at the time of stopping the operation.

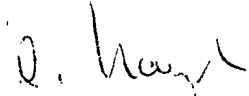
18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on ((571) 272-1342703).

Art Unit: 1753

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is.

(571) 272-1300.



Kishor Mayekar
Primary Examiner
Art Unit 1753